

IN THE CLAIMS

1. (Previously Presented) An image processing apparatus comprising:
 - a decompression unit to perform a decompression process on an image file compressed using a format other than a JPEG 2000 format;
 - a compression unit to perform a compression process on a non-compressed image file or the image file decompressed by the decompression unit using the JPEG 2000 format;
 - a designation allowing unit to allow a designation of a region of interest for an image file stored in a storage region;
 - a determination unit to determine that the image file corresponds to at least one of a non-compressed file and a compressed file compressed using a format other than the JPEG 2000 format;
 - a compression execution unit to compress the image file using the JPEG 2000 format by use of the compression unit in a case where the determination unit determines that the image file corresponds to a non-compressed file, and decompressing the image file by use of the decompression unit and compressing the decompressed image file using the JPEG 2000 format by use of the compression unit in a case where the determination unit determines that the image file corresponds to a compressed file compressed using a format other than the JPEG 2000 format; and
 - an extraction output unit to extract from the compressed image file compressed by the compression unit a plurality of blocks corresponding to a region of interest designated by the designation allowing unit, and outputting image data corresponding to the extracted blocks.
2. (Previously Presented) The image processing apparatus as claimed in claim 1, wherein the blocks as units in which image data are extracted by the extraction output unit correspond to tiles of the JPEG 2000 format.
3. (Previously Presented) The image processing apparatus as claimed in claim 1, wherein the blocks as units in which image data are extracted by the extraction output unit correspond to precincts of the JPEG 2000 format.
4. (Original) The image processing apparatus as claimed in claim 1, wherein the compression unit performs a wavelet transform process using a 5×3 filter bank.

5. (Original) The image processing apparatus as claimed in claim 1, wherein the compression unit performs a wavelet transform process using a 9×7 filter bank.

6. (Previously Presented) The image processing apparatus as claimed in claim 1, wherein the decompression unit performs a decompression process on an image compressed using a DCT (Discrete Cosine Transform) coding format as the format other than the JPEG_2000 format.

7. (Original) The image processing apparatus as claimed in claim 1, wherein the extraction output unit extracts and outputs the blocks in units of tiles.

8. (Original) The image processing apparatus as claimed in claim 1, wherein the extraction output unit extracts and outputs the blocks in units of precincts.

9. (Previously Presented) The image processing apparatus as claimed in claim 1, wherein the extraction output unit adjusts a resolution of the extracted blocks to be output.

10. (Previously Presented) The image processing apparatus as claimed in claim 1, wherein the extraction output unit outputs the extracted blocks as a monochrome image.

11. (Original) The image processing apparatus as claimed in claim 1, wherein the extraction output unit successively outputs layers included in a code stream that is generated in the compression process performed by the compression unit starting from an upper layer.

12. (Previously Presented) An image processing method that is realized using, as a hardware resource, a computer having a decompression unit to perform a decompression process on an image compressed using a format other than a JPEG 2000 format and a compression unit to perform a compression process on a non-compressed image file or the image file decompressed by the decompression unit using the JPEG 2000 format, the method comprising:
allowing a designation of a region of interest for an image file stored in a storage region;

determining that the image file corresponds to at least one of a non-compressed file and a compressed file compressed using a format other than the JPEG 2000 format;

compressing the image file using the JPEG_2000 format by use of the compression unit in a case where the determination unit determines that the image file corresponds to a non-compressed file, and compressing the decompressed image file using the JPEG 2000 format using the compression unit in a case where the determination unit determines that the image file corresponds to a compressed file compressed using a format other than the JPEG 2000 format; and

extracting from the compressed image file compressed by the compression unit a plurality of blocks corresponding to a region of interest designated by the designation allowing unit and outputting image data corresponding to the extracted_blocks.

13. (Previously Presented) A computer readable storage medium storing an image processing computer program that is installed in a computer having a decompression unit to perform a decompression process on an image compressed using a format other than a JPEG 2000 format and a compression unit to perform a compression process on a non-compressed image file or the image file decompressed by the decompression unit using the JPEG 2000 format, the program controlling the computer to perform a method comprising:

performing a compression process on an image using the JPEG 2000 format;

performing a decompression process on an image compressed using a format other than the JPEG_2000 format;

allowing a designation of a region of interest for an image file stored in a storage region;

determining that the image file corresponds to at least one of a non-compressed file and a compressed file compressed using a format other than the JPEG 2000 format;

compressing the image file using the JPEG 2000 format by use of the compression unit in a case where the image file is determined to correspond to a non-compressed file, and compressing the decompressed image file using the JPEG 2000 format by use of the compression unit in a case where the image file is determined to correspond to a compressed file compressed using a format other than the JPEG 2000 format; and

extracting from the compressed image file compressed by the compression unit a plurality of blocks corresponding to a designated region of interest and outputting image data corresponding to the extracted blocks.